THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

Meeting Minutes for May 9, 2002

Members in Attendance:

Mark P. Smith	Designee, EOEA
Marilyn Contreas	Designee, DHCD
Mike Gildesgame	Designee, DEM
Glenn Haas	Designee, DEP
Gerard Kennedy	Designee, DFA
Mark Tisa	Designee, DFWELE
Joe McGinn	Designee, MDC
Joe Pelczarski	Designee, CZM
Richard Butler	Public Member
Frank Veale	Public Member
David Rich	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Linda Marler	DEM
Michele Drury	DEM
Vicki Gartland	DEM
Steve Garabedian	USGS
Eileen Simonson	WSCAC
Jessica Stephens	Neponset River Watershed Association
Lise Marx	MWRA
Jesse Stratton	Mass Farm Bureau
James Miller	Town of Stoughton
Jarrett Selig	SEA
Jeanne Fleming	Town of Stoughton
Nigel Pickering	CRWA
Richard Hatten	MGWA
Sally Desmond	MGWA
Alex Richman	Texas Instruments
Lorraine Downey	MWRA

Agenda Item #1: Executive Director's Report

- Smith noted that the Interbasin Transfer Guidebook is being updated. A first draft will be presented to the WRC in early summer.
- Two public hearings are scheduled for the Weymouth Landing Area Sewer Interbasin Transfer application on May 23rd: one in Boston at 2 PM and one in Weymouth at 6 PM. WRC members should make an effort to attend.

- The House is in the process of amending its budget. EOEA sent a letter expressing concerns that funding for Mass GIS has been eliminated; EOEA is also concerned about the lack of operating budget.

Marler provided an update on the hydrologic conditions:

- There have been three good months in a row, but indicators are still below normal.
- We are about 68% of normal precipitation for water year 2002, statewide. There have been some improvements - ground water and streamflow levels are coming up.
- There have been some minor increases in streamflow since January, but overall conditions are still below normal.
- Some water supply reservoir levels have come back up to normal levels for this time of year. Reservoirs should be 100% full by now; Worcester is still below normal (78%) and Cobble Mountain in Springfield is at 68%. There are concerns. The problem is most pronounced in the Central and Connecticut Valley regions. Some smaller reservoirs will full up rapidly during heavy rain events, but they have a lower storage capacity, so they will diminish rapidly as well. The Quabbin Reservoir is 84% full. This is below the normal level for this time of year, but quite a bit above the drought levels outlined in MWRA's drought plan. A number of communities have implemented outdoor watering bans and are taking actions to get through the summer, despite the dry conditions. DEP is actively working with communities.
- Fire danger levels have gotten very high in the last few months. There have been a few fires as well: one at Blue Hills and another in the Central region. We are hoping this will diminish once the trees leaf out.
- Predictions are not conclusive. The Weather Service is predicting below normal precipitation during the next two weeks. The jet stream seems to have retreated north; some of the west-east storms are missing this area. The seasonal outlook for May, June and July give equal chances for above, below or normal precipitation. There is a possibility of an El Niño developing in the South Pacific. Depending on the strength, this could help with precipitation, but not until the fall.
- Tropical Storm season starts June 1st. This could help if we get some heavy storms.

Agenda Item #2: Vote – Stoughton's Application under the Interbasin Transfer Act for Admission to the MWRA's Water Works System

Drury acknowledged Stoughton's representatives and stated that a public hearing on Staff Recommendation was held on April 18th. It was sparsely attended. There were no new major comments. The draft decision has some amendments. The comments on drought levels made by WSCAC have been addressed. Under the conditions for Criterion #2, the word "protect" was added to the condition to "protect and maintain local sources" in response to comments received at the public hearing on the Staff Recommendation.

Stoughton is applying to the MWRA to supplement its existing sources. They are asking for a maximum of 2.5 mgd. Stoughton meets all of the criteria of the Interbasin Transfer Act, though there are conditions for Criteria #2 and #3. The conditions for Criterion #3 are to continue reporting to the WRC on their conservation program. The average unaccounted-for water for past five years was 11%; the Interbasin Transfer Performance Standard for unaccounted-for water is 10%. Stoughton has shown a declining trend over the past five years; during the past two years, it was at 9%. Criteria #4 and #6 don't apply to this project.

Gartland discussed compliance with Criteria #5 and #8. Areas of concern are the Swift River at Bondsville, which is the area where MWRA is required to maintain a flow of 20 mgd. This is five miles downstream of the Quabbin. There are areas throughout the river where fish habitat is important. It is a cold water fishery. Several things were reviewed. The demand for water has changed significantly over the period of record, by 100 mgd. The last 10 years of the record are more reflective of current demand, so this is what was used in the analyses. These demands were analyzed and the impacts that would have occurred with the addition of Stoughton, as well as with Reading and Wilmington, were added, so cumulative impacts could be evaluated. The Quabbin Reservoir has large amount of storage. The flow release required at Bondsville is always met. Uncontrolled releases were evaluated. No significant change would occur. Looking at flow data over last 10 years, the date when the actual highest flow occurs has improved somewhat. It has changed from the middle of July to beginning of June, which is an improvement. DFW was concerned that spills of warmer water from the top of the reservoir were occurring. This is an improvement in the timing of these uncontrolled releases. Total releases (spills and required releases) experienced no significant change. Drought levels were also looked at. The frequency with which MWRA goes into certain drought levels would not increase significantly during a 60's drought, with or without the proposed demands. Simonson had asked about other levels. The below normal level over period of record (50 yrs) is now 56 months. This will increase to 59 months; the drought warning level is now 33 months. It will increase to 35 months. These increases occur primarily during the 60's drought. These levels trigger requests for voluntary water conservation.

Different flows were analyzed. Aquatic base flow, the 95% flow duration, flood flows and flow velocity did not change significantly. The frequency of aquatic base flow would be reduced 2% of the time, due to Stoughton, and flood flows would be reduced 1.4%. Clayton had asked about the impacts to aquatic base flow in a drought. This would not change with Stoughton.

Fisheries, hydro power and recreation were also analyzed. There were no significant impacts, however, this is an impacted environment and there are some fishery concerns. This is probably more of an operational issue, and there may be room for future improvements.

Smith asked Drury to describe the conditions of the recommendation:

In order to fully comply with Criterion #2, that all reasonable efforts have been made to identify and develop all viable sources in the receiving area of the proposed interbasin transfer.

1. Stoughton must protect and maintain its existing local sources. If use of any existing source is to be abandoned by the town in the future, the Town must report this to the WRC before the source is abandoned.

In order to fully comply with Criterion #3, that all practical measures to conserve water have been taken in the receiving area:

1. Stoughton must continue effective demand management programs which meet the Interbasin Transfer Performance Standards for Criterion #3, Water Conservation.
2. Stoughton must provide the DEP Annual Statistical Reports to the WRC for the first five (5) years after the town begins to receive MWRA water to determine if the programs in place are successful in keeping unaccounted-for water below 10% and residential gpcd at 65 or less.
3. If the amount of unaccounted-for water increases to greater than 10%, Stoughton must either provide an explanation of why this has occurred (e.g. water main break/large fire, etc.) or provide a plan, for WRC approval, to reduce unaccounted-for water to acceptable levels.

4. If residential gpcd increases above 65, the Town must implement a comprehensive residential conservation program that seeks to reduce residential water use through a retrofit, rebate or other similarly effective program for encouraging installation of household water saving devices, including faucet aerators, showerheads and toilets and through efforts to reduce excessive outdoor water use, including the imposition of seasonal water use rates. If this occurs, the Town must provide a plan for this program to the WRC for approval.
5. Stoughton must conduct a formal water supply system audit every three to five years, in accordance with the 1992 Water Conservation Standards for the Commonwealth of Massachusetts, to determine where water can be saved and the effectiveness of existing water conservation practices. Results of these water audits should be provided to the WRC.

In order to fully comply with Criterion #7, that the community has adopted or is actively engaged in developing a local water resources management plan.

1. Stoughton must incorporate the comments received on its Draft Local Water Resources Management Plan and submit a final plan to the WRC for approval. This must occur before the proposed MWRA connection is activated.

Smith referred the WRC to page 20 of the Staff Recommendation. As MWRA adds more customers, they will need to provide more details on how fisheries will be impacted. He feels there are improvements that can be made within the confines of the existing releases. The Staff Recommendation states "…as part of any application that may be made by additional communities wishing to join the MWRA water supply system, the WRC will require the Authority to provide information on whether any changes can be made to improve habitat or flows downstream of both Winsor and Wachusett Dams, or to protect the Ware River from the effects of diversions to the Quabbin Reservoir. This information should be based on discussions with the Division of Fisheries and Wildlife, the Watershed Team Leaders for both the Nashua River basin and the Chicopee River basin and other interested parties. In addition, as part of this analysis, the MWRA should determine ways to balance water supply yield with environmental benefits . . .".

V O T E	Butler moved, with a second by Haas, to approve the Staff Recommendation to approve Stoughton's request for admission to the MWRA Water Works System under the Interbasin Transfer Act. The vote in favor was unanimous of those present.

Smith said that there are still two other approvals that Stoughton must obtain: the MWRA Advisory Board's and the MWRA Board of Directors'. Stoughton hopes to get these approvals by June, so construction of their pipeline can begin. Stoughton has had a long-standing water supply issue. Getting MWRA water is a good long-term solution for the town. Veale asked if Stoughton was still looking at Bluestone. Miller said that Town Meeting in 2001 voted to pursue MWRA over Bluestone. Veale asked about contamination in public water supplies. Miller said that this was an issue with private wells in Stoughton, but not the public supply. Zimmerman asked what the source was. Miller stated that it was old industrial sites.

Fleming thanked the WRC and Staff for all their assistance and cooperation. Stoughton does intend to maintain and protect its local sources.

Smith stated that at yesterday's MWRA Board meeting, a study was presented that looked at the Water Works system and potential future demands. He asked if the WRC was interested in a presentation. The reply was affirmative, so it will be scheduled for a future meeting. Simonson asked that WSCAC and the MWRA Advisory Board be invited.

Agenda Item #3: Vote – Environmental Impact Report Scope for Admission to the MWRA to be Used in Place of the Current IBT Application

Drury stated that last month the WRC approved three other scopes to be used in Environmental Impact Reports to address Interbasin Transfer Act issues in place of the current IBT application forms, now that MEPA requires a full EIR for all "significant" IBTs. Using the EIR for the IBT application will streamline the process and be the best vehicle for all involved to address the issues which need to be addressed for IBT review.

This scope is for communities joining the MWRA Water Works system. Last month Simonson raised an issue which we tried to address. The changes are on page 5. The scopes in no way circumvent the full MEPA process. The proponent will still need to contact MEPA to get a complete scope, and these IBT scopes will need to be tailored to specific projects.

V O T E	Zimmerman moved, with a second by Veale, to adopt the Environmental Impact Scope for Admission to the MWRA to be used in Place of the Current IBT Application. The vote in favor was unanimous of those present.

Agenda Item #4: Vote - Lawn and Landscape Water Conservation Policy and Guidance

Smith said he had received an email from the American Ground Water Trust, which he distributed. Rich requested that the vote on the policy and guidance to be separate, because he was uncomfortable with the policy. Kennedy stated that DFA was concerned about the use of Sudbury's by-law as a guideline. DFA thinks it is too narrow in scope. It excludes animal maintenance and other agriculture, as it is defined in the statute, and while DFA recognizes that this is a lawn and landscape guidance and policy, it could be taken to prohibit watering for animal uses and other agriculture. Smith stated that he had an amendment that would clarify this. DEP is in the process of updating its model by-law, so Smith suggested that the WRC approve this without Appendix A, where the by-laws are listed. He also suggested that we add maintenance of existing native vegetation. Contreas stated that not all native vegetation is drought tolerant. Smith said he would work on language so that this is not confusing.

First amendment: Change the language on page 13 to "Communities considering bylaws that limit the use of irrigation systems or restricting watering or irrigation should include an exception to protect commercial agricultural operations. This exemption should exempt all the various water uses of the various forms of agriculture, as defined at General Laws Chapter 128, Section 1A".
Second amendment: to approve without Appendix A
Third amendment: Add concept of maintenance of existing native vegetation in discussing minimizing lawn size.

VOTE	Contreas moved with a second by Rich to approve the amendments to the Guidance. The vote in favor was unanimous of those present.

VOTE	Zimmerman moved with a second by Rich to approve the Lawn and Landscape Water Conservation Guidance, as amended. The vote in favor was unanimous of those present.

Rich discussed his concerns with the policy. The WRC has taken the position that the policy is not regulation, but guidelines. Rich would rather see something this comprehensive passed as guidance, not as a policy. He'd rather take this more slowly. He is concerned that the policy will be misconstrued as regulation. Veale said that we can't be responsible if communities use this the wrong way. Rich said that whatever we pass as a policy must be in the best interest of the Commonwealth. It should not be used in ways we did not intend.

Zimmerman recused himself from the discussion and vote because CRWA is going to be selling systems that store water. He did not want to vote on an issue that could benefit this commercial venture.

Haas said he had similar concerns as Rich about the policy. If this is adopted as a WRC policy, it is hard for him to understand how DEP or any other EOEA agency would not be required to implement the policy through its regulatory actions. The WRC cannot adopt this, thinking it is nothing more than a broad policy statement. It will be incumbent on the agencies to mandate this policy. Smith disagreed. Gildesgame stated that there are examples of where the WRC has adopted policies that have been incorporated into regulations, but there are other examples where the policies are there as guidance for decision making. Gildesgame suggested that we get a legal opinion on this. Gildesgame said that the preamble should clearly state how this might be used.

Smith said he took Rich's concerns very seriously, especially since it was the municipal water suppliers who asked us to take up this issue in the first place. At some point though, a WRC policy is important, especially when we are trying to figure out where lawn and landscape water use fits into the hierarchy of water uses, as compared with public health and safety. The policy statement is quite short, the rest is recommendations. This is supposed to be an addendum to our state water conservation standards. These standards include a goal, standards and recommendations. He has tried to put in very clear language to distinguish this. He agrees that it is not unusual to put out guidance first and then make it into standards. He said that if people felt strongly about this, the vote should be postponed.

Haas said it would be helpful to separate out the recommendations from the policy. The policy statement should stand alone. Rich agreed. A water supplier or state agency should not be put into the position, for example, of regulating things that are not within its jurisdiction. Something should be put up front that could say that these are **recommendations** to be considered. Kennedy suggested that it would make sense to have the policy be a stand alone statement that

refers to the recommendations. Simonson said that DEP does a case by case evaluation of conservation measures, so it would be a misconstruction to assume that DEP would apply these recommendations on a wholesale basis. The policy must come first. Hatton said that each town has different requirements for well drilling. If this policy is put out, each town will have their own interpretation. He agreed with Rich that the guidelines should go out first to see how the towns will react. Smith suggested that we delay the vote and either refine to language or the format (based on Kennedy's suggestion). There should be strong support for this within the Commission.

Agenda Item #5: Presentation – "Smart Storm"

Zimmerman said CRWA started looking at ways to capture and store or recharge stormwater in 1996. This presentation explains the system that CRWA is coming out with commercially. Pickering said that this is beneficial to the environment and it is economical. Some of the water management issues in eastern Massachusetts are increased water demand, increased impervious surfaces creating more runoff and less recharge, growth, exporting more water out of local basins, towns sharing aquifers. All this results in less baseflow to streams, especially in summer. This product tries to address these issues. On an annual basis, Massachusetts has plenty of water. But in the summer, there is little to no recharge and towns use about three inches of the recharge in the summer. This system tries to supplement storage.

Smart Storm is basically a cistern tank. Overflow is connected to a dry well designed to recharge ground water and the tank can be used for localized watering. The system also has a "roof washer" to divert the first millimeter of water to address some of EPA's concerns about water quality. The tank will act as a sedimentation chamber. Some benefits are increased recharge, decreased runoff volumes, reduced potable water demand for irrigation, less peak water demand, and possible use as an emergency water supply. In this area, a tank with about 1000 gallon capacity is needed. A dry well of 800 gallons will handle a 1-inch storm. Total cost would be about $2000.

Gartland asked why EPA was concerned about the first flush from the roofs. Pickering answered that this water does not go through the topsoil and impurities are not removed. CRWA will be monitoring water quality in these systems.

In a low density residential area, very little water ends up in the storm drain system, so with a tank-type system, local recharge will not be augmented very much. The Smart Storm system works much better in medium or high density areas. So for an area like Weymouth, roof-top collection would yield 4 inches/year or 1.5 mgd of recharge. For stormwater it would yield 8 inches/year or 3 mgd. Smart Storm costs pennies to treat storm water. There are significant economies in using this type of system.

To see impacts on the August median flow, three inches of water per year is 0.21 cfsm and probably only 0.15 shows up in August, because some water goes into storage. Impacts of increased withdrawals were offset by the recharge from Smart Storm.

Recharge can play a significant role in offsetting urban growth. Smith asked about the size of a dry well needed to offset withdrawals. Pickering answered that it is a function of the number of households and roof area. In a low density situation, there is only about 0.5 inch of recharge per year. It is not ideal for rural areas. It becomes more of a viable system in medium and high

density areas. Smith said that this would be more appropriate to recharge stormwater that is running off directly into a stream, rather than to mitigate a water withdrawal. Zimmerman said that this could benefit lower density areas by reducing demand on potable water supplies in summer, through the use of the stored water for irrigation. It does enhance storage during critical months.

Drury asked about the size of the system. How much land area would need to be given up for this system. Pickering answered that it is an underground system. Only about 500 square feet would need to be excavated, but it depends on the soils. The drywell could go under a parking lot or patio. Zimmerman said that he expected that homeowners would not be installing these, but water/sewer departments would be installing them because it would cut their costs for treating stormwater. Marler asked about the cost to the homeowner to use this for irrigation. Zimmerman said that it is still cheaper to use the potable water. Smith said that this could be beneficial in areas subject to flooding by providing more storage.

Meeting adjourned

Minutes approved 8/12/04